

Developing Xanamem™ for Alzheimer's Dementia

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Investor Presentation
March 2015



Actinogen
Medical

Forward Statements



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Actinogen Medical - Overview



Developing a novel treatment for Alzheimer's disease (AD) and Mild Cognitive Impairment (MCI)

- Lead compound Xanamem™ blocks production of cortisol – the stress hormone – in the brain. A novel mechanism of action

Successful early development – Phase II planning underway

- Positive results in pre-clinical and first Phase I study – early development funded by the Wellcome Trust
- Initiating second Phase I study and final pre-clinical studies – results due mid-2015. Research fully funded.
- Phase II study planned for 2016 in AD and MCI
- US FDA's designation of Mild Cognitive Impairment as an indication shifts the landscape for AD drug development to much earlier treatment

Alzheimer's – a significant and growing unmet medical need

- AD population expected to triple over the next generation, increasing prevalence underpinned by shifting age demographic
- American Alzheimer's Association estimates the direct healthcare cost in 2013 of US\$250bn

Board and Management



A highly experienced Board and Management team with a wealth of drug development, commercialisation and clinical research expertise



Martin Rogers
Chairman

- Biotechnology entrepreneur and executive
- Chair and Non Executive Director of OncoSil (ASX:OSL), Chair of Rhinomed (ASX:RNO) and Non-Executive Director of Cellmid (ASX:CDY)



Bill Ketelbey
CEO

- MD with 30 years' experience in pharmaceuticals
- Senior roles at Pfizer, including development of Aricept™, the current leading AD treatment



Vince Ruffles
VP Clinical
Research

- Extensive drug development experience over 20 years
- Responsible clinical development and regulatory strategy



Jason Loveridge
Non-Executive
Director

- Former head of Nomura Life Sciences Fund in the UK with 28 out of 34 investment wins in investing in Biotech



Anton Uvarov
Non-Executive
Director

- Healthcare equities analyst
- Executive Director of Sun Biomedical

A significant, unmet need



Alzheimer's disease is emerging as one of the most significant health challenges of our time

- A person develops AD almost every minute in the US¹
- AD cost the US healthcare system **\$US250 billion** in 2013
- Estimated to increase to **US\$1 trillion** by 2050, outstripping the cost of treating all other diseases
- Current treatments are of limited benefit. New and alternative treatments are desperately needed
- Xanamem™ has the potential to be a multi-billion dollar product



Alzheimer's is the only cause of death among the top 10 in America that
**CANNOT BE PREVENTED,
CURED OR EVEN SLOWED.**



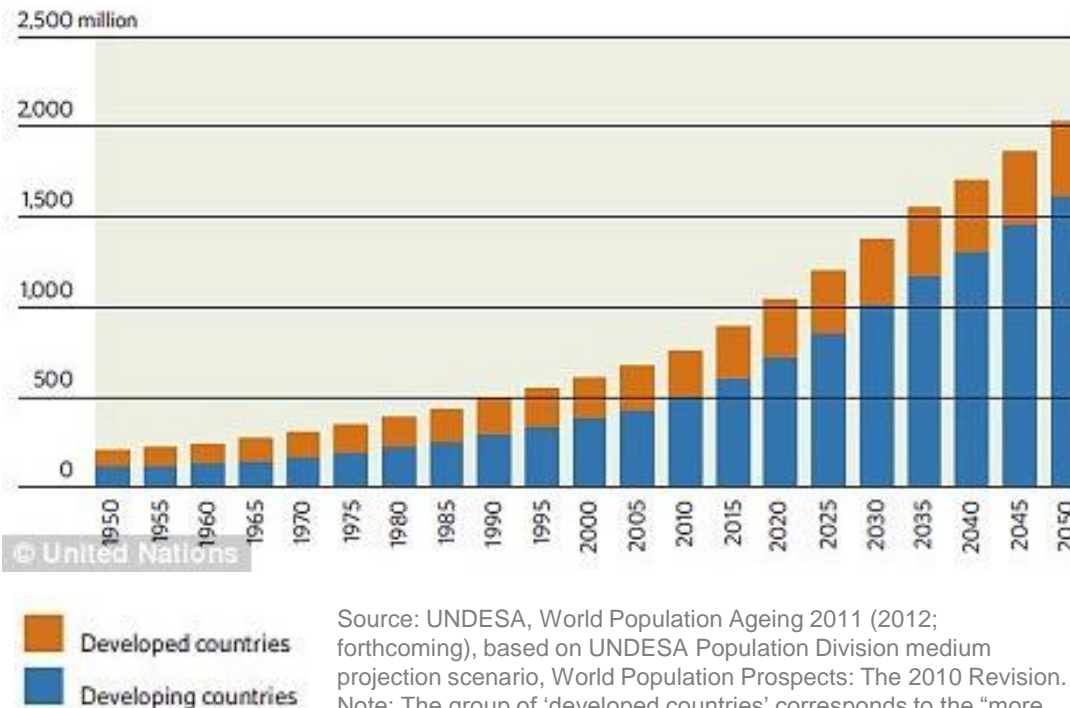
1 in 3 Seniors
DIES WITH ALZHEIMER'S
or another dementia.

¹Alzheimer's Association- Facts and Figures 2014)
http://www.alz.org/downloads/Facts_Figures_2014.pdf?utm_content=bufferb49b5&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

AD consequence of a rapidly ageing population



Number of people aged 60 or over: World, developed and developing countries, 1950-2050



Source: UNDESA, World Population Ageing 2011 (2012; forthcoming), based on UNDESA Population Division medium projection scenario, World Population Prospects: The 2010 Revision. Note: The group of 'developed countries' corresponds to the "more developed regions" of the World Population Prospects: The 2010 Revision, and the group "developing countries" corresponds to the "less developed regions" of the same publication.

- Affects nearly **36 million patients** worldwide¹
- In Australia, there are currently **320,000 AD** sufferers – by 2050, this is expected to rise to close to **1 million**.
- Commonly diagnosed in patients in their 60's, with 25% of 85 year olds and up to **50% of 95 year olds** developing the disease
- AD is the **sixth leading cause** of death in the US²

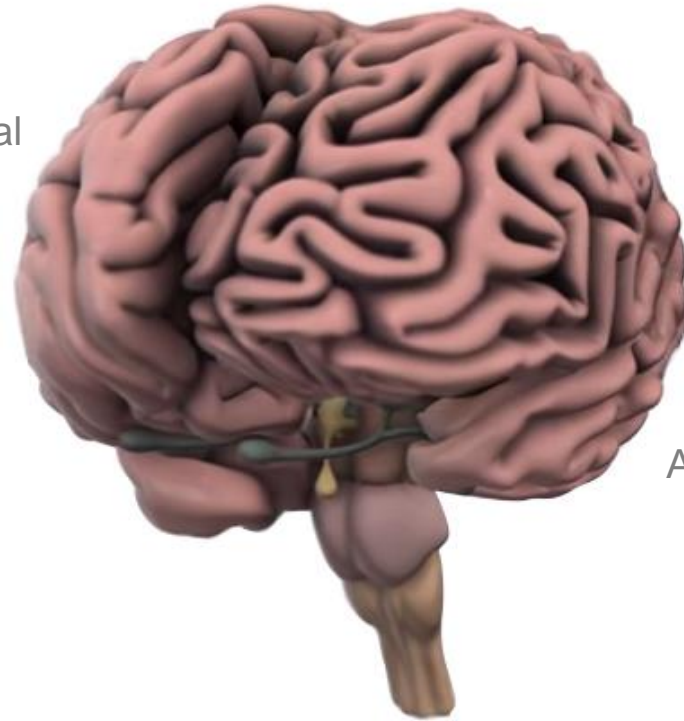
The hallmarks of AD



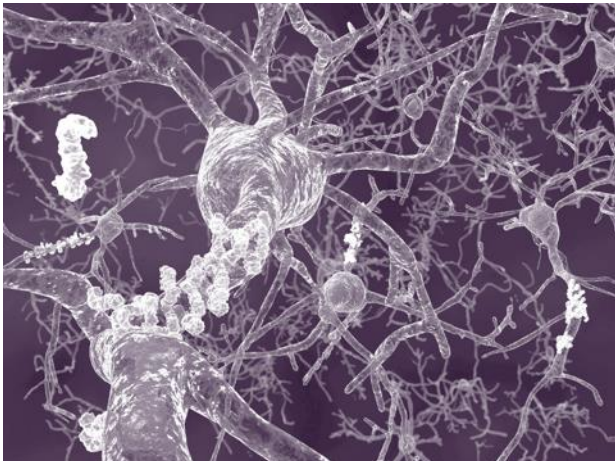
Memory, language and abstract reasoning impairment with

- brain shrinkage – particularly hippocampus and cortex
- neuronal loss
- amyloid plaques
- neurofibrillary tangles

Normal



Alzheimer's



Signs of AD



Dementia is typically documented by decreasing performance on neuropsychological tests assessing memory, general knowledge, language, abstract reasoning and the ability to perform particular tasks requiring minimal skill:

'Please draw a clock. Put the hours on it and set the time at 2:45'



Score 10:
Normal



Score 8:
Mild Cognitive Impairment
(numbers error and placement of hands)



Score 4:
Moderate cognitive impairment



Score 2:
Severe cognitive impairment

Overview of Xanamem™



Xanamem™ - under development as a treatment for Alzheimer's disease and its precursor Mild Cognitive Impairment



- A novel mechanism of action blocking the production of cortisol in the brain
- Excess cortisol (the stress hormone) has been shown to lead to reversible memory loss, amyloid plaques and neural death – hallmarks of AD
- Link between excess cortisol and cognitive performance identified in patients with Cushing's disease, Alzheimer's, depression and normal aging
- Early development of Xanamem™ funded by the Wellcome Trust: \$25m over seven years
- Second Phase I study underway - data expected mid-2015
- Phase II to target Mild Cognitive Impairment – the early onset of AD
- Patent protection to 2030, additional patents pending



THOMSON REUTERS

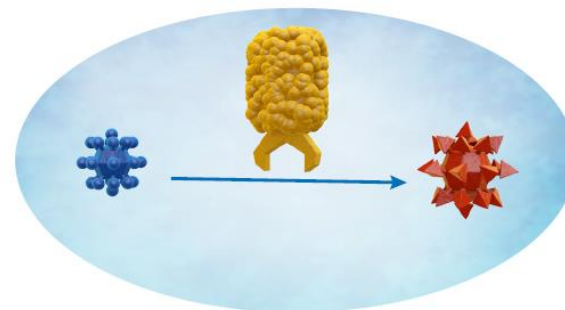
recently named Xanamem™ as one of the top five drugs in Phase 1 development in the global pharmaceutical or biotech industries

Mechanism of action: a key differentiator

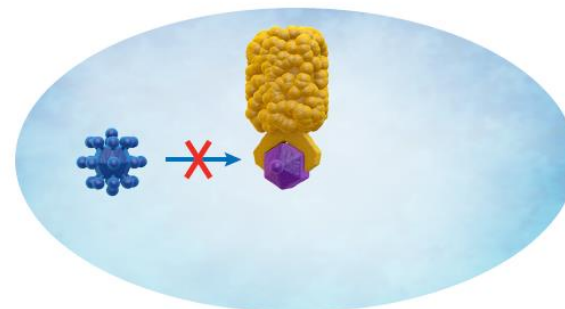


Xanamem's novel mechanism of action sets it apart from other AD treatments

- The HSD1 enzyme activates cortisone, producing cortisol – the stress hormone
- Xanamem™ blocks the HSD1 enzyme and prevents production of cortisol
- Excess cortisol contributes to the memory loss, amyloid plaques and neural death associated with AD
- The HSD1 enzyme is most concentrated in the hippocampus and frontal cortex of the brain – the areas most impacted by AD
- Pre-clinical and clinical data suggests Xanamem™ has the potential to treat AD and its early prodromal stage, Mild Cognitive Impairment and significantly alter the course of the disease



HSD enzyme activates cortisone producing cortisol



Xanamem binds to HSD, blocking cortisol production

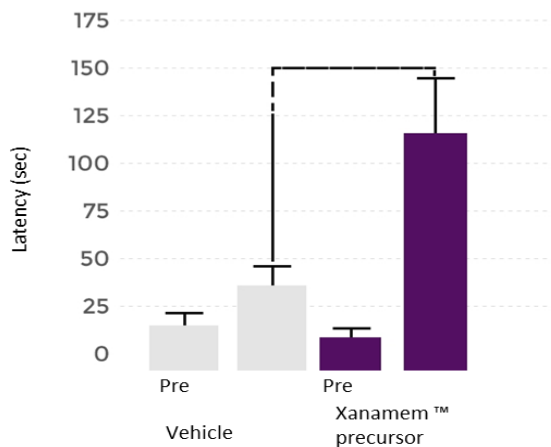
Pre-clinical data



Xanamem™- a highly selective HSD1 inhibitor in pre-clinical animal models.

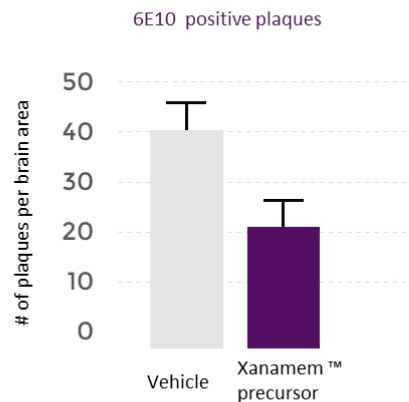
- Inhibition of HSD1 improves cognition in ageing and AD models
- Inhibition of HSD1 reduces A β plaque burden and plasma A β in AD models

Cognitive Enhancement with Xanamem™ in AD (Performance in Passive Avoidance Test, treatment for 28 days)



AD - progressive cognitive decline

Xanamem™ reduces number of A β plaques in AD brain (28 day treatment)



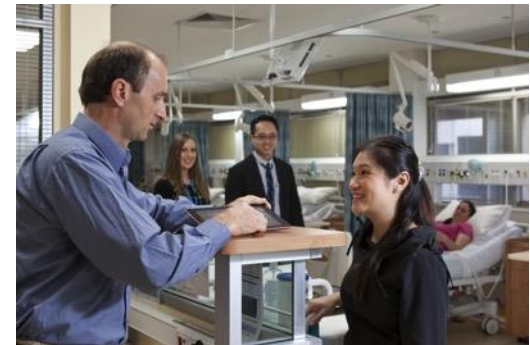
AD - associated with amyloid plaques in the brain

Clinical trials overview



Second Phase 1 study in healthy volunteers underway

- Trial conducted at Linear Clinical Research, Sir Charles Gairdner Hospital Perth, Western Australia.
- 40 healthy volunteers enrolled across 3 studies
- First study to confirm how the body absorbs and metabolises Xanamem™ and the optimal dose
- Two follow-on studies:
 - Fast-fed study in a cohort of 12 patients
 - Additional study of 4 patients to confirm the central nervous system pharmacokinetics of Xanamem™
- Full results expected by mid 2015



Phase II efficacy and safety study in patients with AD and Mild Cognitive Impairment. Planned for 2016 in US, Australia and UK

Pipeline

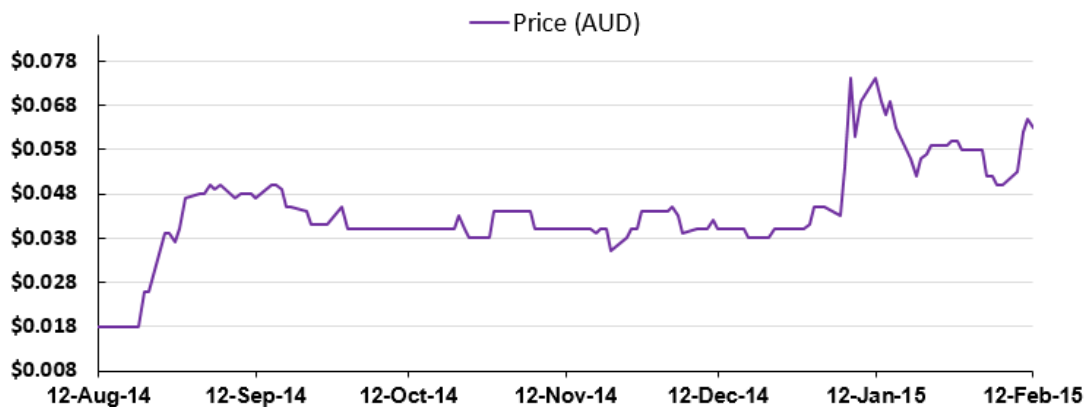


Xanamem's novel mechanism of action – blocking excess cortisol production – has many additional possible applications

- Relevant to diseases of the central nervous and endocrine/metabolic systems
- Assessing potential development opportunities in:
 - Cognitive dysfunction in schizophrenia
 - Cognitive dysfunction in depression
 - Type 2 diabetes
 - Obesity
 - Cardiovascular disease
 - Neuroprotection in metabolic disease



Financial profile



Key Corporate Data:

Market Cap:	\$35 m
Share Price	\$0.072
Cash as of 31 Dec 2014	\$2.05 m
Shares on issue	492 m

Top Ten Shareholders	Percentage
Edinburgh Technology Fund Limited	9.78%
JK Nominees Pty Ltd	7.05%
Tisia Nominees Pty Ltd	6.83%
Mr Martin Rogers	5.08%
Warmbi SARL	4.41%
Denlin Nominees Pty Ltd	4.06%
Mr Jason Peterson & Mrs Lisa Peterson	3.56%
Webinvest Pty Ltd	3.35%
Oaktone Nominees Pty Ltd	2.99%
Dr John William Ketelbey	2.48%

Milestones



Second
Phase I
trial

- ✓ Ethics approval received
- ✓ Initiated

Results for Phase I
trial and final
preclinical studies

Phase II efficacy
study in patients
with AD and Mild
Cognitive
Impairment

EARLY-2015

MID-2015

2016

Final
pre-clinical
studies for
IND

- ✓ 1 of 2
initiated

Establishment of
Xanamem
Clinical
Advisory Board

Phase II
study and protocol
design

Investment highlights



- Xanamem™ a potential treatment for AD and its early symptomatic stage Mild Cognitive Impairment
- Significant unmet need in a huge and growing global market
- Novel mechanism of action, targeting the stress hormone cortisol – a key differentiator
- Hypothesis backed by good pre-clinical and clinical evidence. Early development funded by Wellcome Trust
- Final Phase I and preclinical results due mid-2015; funded through to completion of these studies
- IND filing and Phase II study planned for 2016
- Patent protection to 2030, additional patents pending
- Tight capital structure with top 20 shareholders owning more than 70%



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Thank you and
questions
